

PO-7931

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WHAT IS CLAIMED IS:

(1.)

A geotextile/polyurethane composite comprising:
one or more geotextiles substantially impregnated with a one-component
heterogeneous liquid polyurethane composition comprising,

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i) an isocyanate groups containing solid dispersed in a liquid
isocyanate reactive compound,

(or)

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ii) a solid isocyanate reactive compound dispersed in a liquid
isocyanate, isocyanate adduct, or isocyanate terminated
prepolymer,

optionally catalysts, viscosity adjusting additives, solvents,
surfactants, crosslinking agents, pigments, fillers, and other
additives.

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2. A liner (for irrigation canals and ditches) comprising the
geotextile/polyurethane composite according to Claim (1.)

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3. The geotextile/polyurethane composite according to Claim (1)
having an elongation of at least about 5 % and a tensile strength of at least
about 200 psi.

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5. The geotextile/polyurethane composite according to Claim (1)
wherein the one or more geotextiles includes at least one thicker, more
sponge-like geotextile.

thicker than
what?

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6. The geotextile/polyurethane composite according to Claim (1)
wherein the one or more geotextiles are substantially impregnated with the
one-component heterogeneous liquid polyurethane composition such that

abstract ✓

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the amount of polymer present in the composite ranges from about 0.2 kg to about 20 kg of polymer per square meter of geotextile.

7. The geotextile/polyurethane composite according to Claim 1,
5 wherein the one or more geotextiles are impregnated with the one-
component heterogeneous liquid polyurethane composition such that the
amount of polymer present in the composite ranges from about 0.5 kg to
about 5 kg of polymer per square meter of geotextile.

10 8. The geotextile/polyurethane composite according to Claim 1
having a thickness of from about 40 microns to about 500 microns.

9. A process of forming a geotextile/polyurethane composite
comprising the steps of:
15 impregnating one or more geotextiles substantially with a one component
heterogeneous liquid polyurethane composition comprising,
i) an isocyanate groups containing solid dispersed in a liquid
isocyanate reactive compound,
or
20 ii) a solid isocyanate reactive compound dispersed in a liquid
isocyanate, isocyanate adduct, or isocyanate terminated
prepolymer,
optionally catalysts, viscosity adjusting additives, solvents,
surfactants, crosslinking agents, pigments, fillers, and other
25 additives;
conforming the one or more heterogeneous liquid polyurethane
impregnated geotextiles to a surface; and
applying heat or a solvent to the heterogeneous liquid polyurethane
impregnated geotextile to form a geotextile reinforced
30 polyurethane/polyurea composite.

10. The process according to Claim 9, wherein the composite is a liner for irrigation canals and/or ditches.

11. The process according to Claim 9, wherein the composite has an elongation of at least about 5 % and a tensile strength of at least about 200 psi.

12. The process according to Claim 9, wherein the one or more geotextiles includes at least one thicker, more sponge-like geotextile.

13. The process according to Claim 9, wherein the one or more geotextiles are impregnated with the one-component heterogeneous liquid polyurethane composition such that the amount of polymer present in the composite ranges from about 1 kg to about 20 kg of polymer per square meter of geotextile.

14. The process according to Claim 9, wherein the one or more geotextiles are impregnated with the one-component heterogeneous liquid polyurethane composition that the amount of polymer present in the composite ranges from about 2 kg to about 5 kg of polymer per square meter of geotextile.

15. The process according to Claim 9, wherein the composite has a thickness of from about 40 microns to about 500 microns.

16. In a process of lining canals and ditches, the improvement comprising including the composite according to Claim 1.

17. In a process of lining canals and ditches, the improvement comprising including the composite made by the process according to Claim 9.